

**Notice of Allowability**

Application No.

10/648,867

Examiner

Mohammad M. Ali

Applicant(s)

MURASE ET AL.

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 08/23/04.
2. ☒ The allowed claim(s) is/are 1-10.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).


\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 08/27/03
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
MOHAMMAD M. ALI  
PRIMARY EXAMINER

### **EXAMINER'S AMENDMENT**

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee. Authorization for this examiner's amendment was given in a telephone interview with Steven F. Meyer on 05/10/07. The application has been amended as follows: The non-elected claims 11-13 for an election without traverse has been cancelled from further consideration. The following brief description for Fig. 4 and Fig. 5 have been included in continuation to brief description of Fig. 3 in page 7 by removing the adverb "and" in line 2 of brief description of Fig. 2 and changing period "." to semicolon ";" in line 2 of brief description of Fig. 3. Fig. 4 is a portion of flow chart that is modified from that of Fig. 3; and Fig. 5 is a portion of flow chart that is modified from that of Fig. 3.

### ***Allowable Subject Matter***

The following is an examiner's statement of reasons for allowance: Claims 1 and 9 are allowable because the prior art of record fails to disclose or suggest or teach the recited an actuator for changing a set pressure differential in such a manner that force applied to the valve body is changed by an external command, the set pressure differential being a reference value of a motion for determining a position of the valve body by the pressure sensing mechanism; a detector for detecting cooling load information in the refrigerant circuit; a first calculator for calculating a target pressure in a relatively low

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pressure region in the refrigerant circuit in response to the detected cooling load information; a suction pressure sensor for detecting actual pressure in the relatively low pressure region in the refrigerant circuit; and a compressor controller for controlling the actuator to eliminate a first differential between the calculated target pressure and the detected actual pressure (see claim 1); an actuator for changing a set pressure differential in such a manner that force applied to the valve body is changed by an external command, the set pressure differential being a reference value of a motion for determining a position of the valve body by the pressure sensing mechanism; a detector for detecting cooling load information in the refrigerant circuit; a first calculator for calculating target surface temperature on the evaporator in response to the detected cooling load information; a surface temperature sensor for detecting actual surface temperature on the evaporator; and a compressor controller for controlling the actuator to eliminate a first differential between the calculated target surface temperature and the detected actual surface temperature (see claim 9).


Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad M. Ali whose telephone number is 571-272-4806. The examiner can normally be reached on maxiflex.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cheryl J. Tyler can be reached on 571-272-4808. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
MOHAMMAD M. ALI  
PRIMARY EXAMINER